



CLASSROOM INNOVATION IN MATHEMATICS GRANT 2010-11

OVERVIEW

Purpose: From 2005 to 2009, state scores in mathematics were stagnant, rising only one percentage point over the four-year span. At the state level, IDOE is currently exploring new, innovative classroom strategies that will help to push mathematics in Indiana forward. One such strategy is the integration of digital curriculum and technology into traditional teaching methodologies.

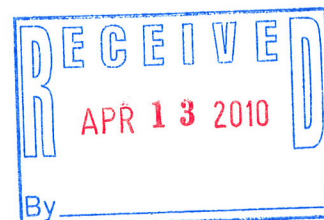
The purpose of the program is to provide a select number of LEAs with the opportunity to use digital mathematics curricula, technology-based instruction, and interactive white boards in lieu of traditional textbooks. This grant provides an opportunity for LEAs to pilot digital curriculum which can be readily aligned to changes in standards and to determine its effectiveness with their student populations and within their contexts. Following the grant, LEAs will either continue the use of digital curriculum through their textbook rental program or discontinue use of the digital curriculum and seek an alternative for curricular materials. Digital curriculum would need to utilize innovative strategies for instruction and represent a significant break from the traditional textbook-oriented instruction and be approved by the IDOE, but it would not serve as a standalone, online course that replaces the classroom teacher. In order to evaluate the effectiveness of these strategies, awards will be limited to schools that propose plans for either: 6th Grade, 7th Grade, 8th Grade, and/or Algebra I. The results of this pilot program will be used to evaluate the effectiveness of digital curriculum and provide data for schools that may look at adopting digital mathematics curricula in the future.

This grant program is funded through the David C. Ford Fund.

Application: Please fill out each part completely. For assistance, you may contact Zach Foughty at zfoughty@doe.in.gov or Phone: (317) 233-5019

I. GENERAL INFORMATION

1. Corp # 9380	2. Corp Name Christel House Academy		
3. Corp Address (Street, City, State, Zip) 2717 South East Street, Indianapolis, IN 46225		4. Telephone (317) 783-4690	
5. Contact Person's Name Mr. Carey Dahncke		6. Contact Person's Email Address cdahncke@chacademy.org	
7. Contact Person's Address (Street, City, State, Zip) 2717 South East Street, Indianapolis, IN 46225		8. Contact Person's Telephone (317) 783-4690 x 1124	
9. Superintendent's Name Mr. Carey Dahncke		10. Superintendent's Email Address Same as #6 above	
11. # of Schools Participating one	12. # of Students Being Served 150	13. # of Teachers Participating three	





II. Project Abstract

Briefly describe the proposed project clearly and concisely using the space provided.

To better prepare its middle school students for the rigors of higher level mathematics at the high school level and beyond and provide students the opportunity to utilize the high quality digital curriculum currently available, Christel House Academy (CHA) will introduce its teachers and students in grades 6 through 8 to the Agile Mind online mathematics curriculum during the 2010-2011 academic year. Student progress toward Indiana State Math Standards will be determined using Acuity, ECA and ISTEP+ online assessments.

To aid teachers in the use and dissemination of Agile Mind, CHA will purchase three Smartboards for classroom instruction. Additionally, affected mathematics teachers and the ICT Manager will participate in Agile Mind training prior to the launch of the online curriculum.

One computer lab will be upgraded with new equipment to accommodate large group instruction and online Acuity and ISTEP+ testing.

Currently, a portion of the middle school 8th grade students uses BestQuest's AlgebrasCool – a multimedia algebra I program. Our experience with using a non-traditional curriculum and instructional programming is very positive and we have experienced high growth. It is our desire to build on this experience and further enhance our curricular and instructional offering – focusing on a unified and sequential techniques.



Please complete one grant narrative for your LEA which includes all schools. Narratives should be double spaced, 12pt Times New Roman font, and not to exceed 10 pages.

III. GRANT NARRATIVE

Software Choice and Rationale: Identify the digital content program you have selected. Describe how this program aligns with the purpose of the grant. Describe how this program will address the instructional needs of your students and teachers.

Christel House Academy (CHA) has selected the Agile Mind digital mathematics curriculum. It aligns with the purpose of the IDOE Classroom Innovation Grant by 1) integrating digital mathematics curricula for middle school students; 2) using white board technology in the classroom setting; and 3) introducing online mathematics assessments (Acuity, ECA and ISTEP+).

Historically, urban students in Indianapolis have struggled in the area of mathematics. This high needs population (90% free and reduced lunch) typically does not have the support mechanisms in place outside the classroom to foster success in the area of mathematics. Low parental education level and lack of technology at home are certainly contributing factors leaving nearly all mathematics achievement to occur in the school setting. CHA has found that differentiated, hands-on instruction is very effective with low-income, at-risk students since multiple learning styles are addressed. This approach has helped CHA close the achievement gap and increase ISTEP+ mathematics scores; however, additional work in this area is critical to preparing middle school students for the challenges of high school and postsecondary education.

CHA selected the Agile Mind digital curriculum because it actively engages middle school students with mathematics via hands-on technology. While developing their technology skills, students learn mathematic concepts in a holistic way by combining “book knowledge” with “real-world” application. Students gain a better understanding of the importance of math when they see the practical ways it is applied on a daily basis. Using graphic technology, manipulatives, and other mathematical tools, students develop conceptual mathematical understanding and critical thinking skills as they explore interesting problems.



For example, to learn the concept of rate of speed and time, students will meet Terrance, the skateboarder. Using the computer mouse, students can move Terrance away from and toward a radar gun and watch as his movements are plotted graphically. The teacher can ask students a series of questions about Terrance's movements based on the graphic representation (i.e. identify certain points plotted on the graph, determine change in distance over time, etc.) and use the prepared student activity sheets to complement the in-class activities. This multiple modality approach (sight, hearing, tactile) creates avenues for all students to achieve, regardless of their learning style.

Agile Mind supports teachers, rather than supplants their expertise, and provides them with tools to deliver dynamic and concept-rich lessons. Teachers have at their disposal lesson planning suggestions, language notes and classroom presentation tools to bring concepts to life. In addition, professional development opportunities are imbedded in the curriculum as "advice for instruction" and online supports include advice from experts and high-yield teaching strategies. Immediate, easy-to-follow assessment reports detail student progress. Using this information, teachers can determine concept mastery or areas requiring more emphasis and practice and adjust their teaching accordingly.

Using Agile Mind, CHA will pursue the IDOE's goal of accelerating mathematics achievement for its students during the 2010-2011 academic year and beyond.

Professional Development: Describe the PD needs of your teacher for using interactive whiteboards and implementing digital curriculum and detail the specific plan for meeting those needs.

Christel House Academy's three middle school mathematics teachers will require professional development in the use of whiteboard technology as well as instruction in the implementation of the Agile Mind curriculum.

Once whiteboards are installed, SMART Technologies has agreed to train the mathematics



teachers (in group and one-on-one settings) in the proper use and care of the whiteboards in their classrooms. One math teacher will participate in training (not funded by this grant) to learn best practice for the use of technology and convey this information to the teachers. The ICT Manager and Principal will also suggest articles, websites and training opportunities pertaining to the effective use of whiteboards in the classroom setting. Additionally, the ICT Manager will provide ongoing technical assistance and troubleshooting.

Agile Mind's professional development focuses on teachers' understanding, development and implementation of the Agile Mind Success Cycle and promotes collaboration and professional practice through common instructional practices and assessment tasks. Four key elements of Agile Mind are specific to enhancing teacher effectiveness and building CHA's capacity to deliver high-quality mathematics instruction:

- Teacher professional development that specifically addresses both pedagogy and content,
- Comprehensive lesson planning and daily instructional support for teachers,
- Classroom presentation tools that support delivery of dynamic and concept-rich lessons, and
- Closely aligned formative assessments designed to inform instruction.

Agile Mind will provide the following professional development opportunities to CHA's teachers:

Two-day Agile Mind Institute—Summer 2010

This regional professional development conference is designed to support the needs and interests of a diverse audience of teachers, coaches and instructional leaders implementing Agile Mind services. Differentiated sessions are organized around course topics and apply to those just getting started with the curriculum to more experienced users. Specific sessions can be customized to meet the needs of CHA's teachers and possible topics could include: an introduction to Agile Mind,



essentials for getting the most out of the curriculum, assessment tips—effectively using the embedded assessments and use of data in instructional decision-making, and advice for instruction/daily support for planning and delivery.

Advisor Sessions—Fall 2010 and Spring 2011

Agile Mind will conduct three Advisor Sessions for CHA during the 2010-2011 academic year. Customarily, these sessions are conducted on-site, however webinars and other formats may also be utilized. Prior to each session, advisors will analyze school data, and when appropriate, conduct phone interviews with teachers or CHA staff. Advisors then spend a half day working with teachers to develop implementation skills and also provide just-in-time support by telephone and e-mail.

Imbedded Professional Development (Advice for Instruction)

As part of the Agile Mind curriculum, teachers will receive on-going professional development in the form of advice for instruction for each lesson/concept as well as access to online supports, including advice from experts and high-yield teaching strategies to make the best use of Agile Mind.

Online Learning Community

According to Agile Mind representatives, there is the possibility of beginning an online learning community for teachers to share best practices, challenges and successes. This proposed community is still in the early stages, but CHA teachers would be strongly encouraged to participate should it become a reality.

Agile Mind offers CHA teachers with ample and easy-to-use tools to increase their knowledge of and comfort with the digital curriculum in order to serve students effectively.

Implementation Plan – Digital Content: Describe your plan for monitoring the implementation of the digital content with fidelity to program guidelines.

Christel House Academy (CHA) will ensure the fidelity of the program, will take all steps necessary to implement the digital curriculum as outlined by Agile Mind, and will monitor the



program through qualitative (classroom visits) and quantitative assessments (activity and usage reports).

Using the Agile Mind checklist of observable traits of productive, stage-appropriate implementation, CHA's principal and the Instructional Coach, will collect qualitative data by observing each middle school mathematics class at least two times each month to assess teacher progress, provide feedback and determine if additional professional development is warranted. Additionally, these classroom visits will provide an opportunity to observe student interaction with the digital curriculum, including excitement and participation levels, understanding of content and technology aptitude.

Monthly activity reports will provide quantitative data for both teacher and student usage of the digital content. Agile Mind protocol suggests teacher usage of at least 60 minutes per week per class, with two hours as the desired. The same protocol calls for 60-90 minutes per week for individual student usage. CHA's principal, or his Assistant Principal, will collect and analyze the monthly activity reports to determine whether the program is being implemented appropriately in all classrooms. If not, steps will be taken to determine the reason/s behind lack of participation and usage and Agile Mind will be consulted to provide supportive strategies for re-engagement.

CHA will ensure all other program guidelines are met as detailed in Section V.—Assurances, including, dedicated whiteboard usage in mathematics classrooms, student online assessments, teacher and student evaluations of the program/curriculum, and adherence to the stated timeline.

Implementation Plan – Interactive Whiteboards: Outline your current inventory of interactive whiteboards, how you can realign current inventory to meet program goals of one interactive whiteboard per classroom mathematics teacher, and what funds you would apply for in order to address these gaps.

Currently, Christel House Academy has one inoperable (and out of date) 3M whiteboard in one of the middle school classrooms and must purchase three devices with the CIM grant to implement the Agile Mind curriculum. If CIM funding is not granted, CHA will seek funding from individuals,



corporations and foundations to purchase the whiteboards; however, the time required to secure this funding will significantly delay the implementation of the Agile Mind curriculum.

Once purchased, CHA's ICT Manager will supervise the installation of the whiteboards in the mathematics classrooms and provide instruction to teachers for the appropriate use and maintenance of the equipment. The ICT Manager will inform teachers about helpful websites, webinars, articles and other materials concerning the effective use of whiteboard technology in the classroom. He will also provide ongoing technical support and troubleshoot issues on an as-needed basis.

Implementation Plan – Online Assessments: Describe each school's capacity and commitment to administer online ISTEP+ and ECA assessments, as well as Acuity Assessments, both with and without additional lab space that grant funds could provide. Describe how teachers will ensure that students are trained on how to properly complete online assessments.

Christel House Academy (CHA) is committed to administering online assessments, but will require the CIM grant to provide for essential equipment upgrades in one of its two computer labs. Presently, CHA's computer lab marginally supports large group instruction and all pieces of equipment are far beyond the traditional end of their useful lives (800mhz P3 computers with 512k memory). Much of the computer hardware is 7 years old and does not have the capacity or features to support stable online assessment. *Without CIM funding for upgrades, CHA will not be in a position to administer additional online assessments.* Presently, the one updated computer lab is used for Acuity testing in 3-8- math, E/LA, social studies and science. With the addition of 9th grade next year, and that addition of Algebra I Acuity, the schedule will not allow for the additional testing time required, unless we have additional capacity by updating the lower lab area.

Provided CIM funding is granted, teachers will take part in training opportunities provided by Agile Mind and IDOE to ensure they fully understand the online assessment features and requirements. Once trained, teachers will supply test-taking instructions and practice test opportunities to ensure their students are adequately prepared to complete the online assessments.



Indiana Department of Education
SUPPORTING STUDENT SUCCESS

IV. BUDGET

See program overview for allowable costs. List each expenditure on a separate line.

Expenditures Budget (Use a separate line for each expenditure, and add rows as needed)				
Expenditure Description	Person Responsible	Cost per Unit	Number of Units	COST
Digital curriculum subscriptions (list vendor) Agile Mind	Agile Mind Mr. Carey Dahncke (CHA)	\$30.00	150	\$4,500
Professional development reimbursements	Mr. Carey Dahncke	\$300	4	\$1,200
Interactive whiteboard (list make and model number) Smart Technologies SMA SB680 (whiteboard)	Mr. Carey Dahncke and Mr. John Riner (CHA)	\$3,500	3	\$10,500
Acuity Algebra set-up fee	Mr. Carey Dahncke	\$4,500	1	\$4,500
Cost for Acuity Algebra administration (per student)	Mr. Carey Dahncke	\$8.75	150	\$1,312.50
Costs related to online assessment	Mr. Carey Dahncke	\$835	30	\$25,000
			Total Funds Requested	\$47,012.50

LOCAL SHARE*

*This is not a requirement for the grant, but it will help us to determine the additional resources need at the local level.

Expenditures Budget (Use a separate line for each expenditure, and add rows as needed)				
Expenditure Description	Person Responsible	Cost per Unit	Number of Units	COST
Professional Development	Mrs Michelle Trout (Instructional Coach)	\$15,000 (approx)	1	\$15,000
Additional lab set up	Mr. John Riner	\$40 (CAT6 wiring)	30	\$1,200
Additional Costs for Interactive Whiteboard (e.g. Installation materials)	Mr. John Riner	\$200	3	\$600
			Total Funds Requested	\$16,800



V. ASSURANCES

By checking each box below, you agree to the following assurances:

☒ The LEA assures that Acuity online assessments will be administered to assess student growth during the grant period (e.g. Acuity Predictive or Pre/Post Test; the exact assessments will be determined by the DOE, but will not exceed 3 tests during the school year, excluding ISTEP+ and ECA).

☒ The LEA assures that, given favorable results on a statewide level, it will give serious consideration to sustained use of digital curricula in all schools in the LEA until the next textbook adoption cycle (2016-17 school year).

☒ The LEA assures that the selected digital curriculum will be implemented, with fidelity, as the core curriculum for all mathematics classrooms (6th Grade, 7th Grade, 8th Grade, and/or Algebra I) at each school that receives grant funds, for the duration of the school year. "With fidelity" implies that districts will take the steps necessary to implement the digital curriculum as outlined by the vendor.

☒ The LEA assures that teachers will be provided with professional development necessary to implement digital curriculum with fidelity. Professional development includes, but is not limited to, training on digital curriculum software, integrating interactive whiteboards into a standards-based classroom, and using Acuity assessments to guide instruction.

☒ The LEA assures that funds used for interactive whiteboards will remain in mathematics teacher classrooms for the duration of the program. Any realignment of current inventory for these purposes will also remain in effect for the duration.

☒ The LEA assures that all 7th and 8th grade students in Algebra I will take the Algebra ECA online.

☒ The LEA assures that all students will take the ISTEP+ online, unless the school can demonstrate an inability to test all students online.

☒ The LEA assures that all teachers that use digital curriculum will participate in an *anonymous* evaluation of the program to determine its ability to impact teaching methods.

☒ The LEA assures that classrooms in which digital curriculum is being used will be available for observation by certain members of the Department of Education, with reasonable notification, to provide for a qualitative analysis of program effectiveness.

☒ The LEA assures that all students will complete a survey regarding the effectiveness of the digital curriculum.

☒ The LEA assures that all hardware and software implementations will be put in place before the start of the 2010-11 school year and that professional development related to this program will begin before the start of the 2010-11 school year.

☒ The LEA agrees to keep such records and to provide such information to the State educational agency, as may be reasonably required for fiscal audit and program evaluation (consistent with the responsibilities of the State educational agency under this part).

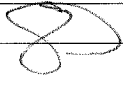

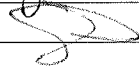


VI. SIGNATURES

List the management team of this grant for each school. Each member of the management team should also sign below. Complete this sheet for *each* school that is included in the district's implementation plan.

School Name:

Grade Levels:

<u>NAME</u>	<u>POSITION</u>	<u>Signature</u>
1. Mr. Carey Dahncke	Superintendent	
2. N.A.	District Math Coordinator	
3. Mrs. Jen Brown	District Assessment Coordinator	
4. Mr. Carey Dahncke	Principal	
5. N.A.	Math Department Chair	